

CLAIMS

1. A constant voltage power supply circuit having an input terminal, an output terminal, a
5 constant voltage power supply unit that generates a constant voltage with a ripple voltage, and a ripple removing circuit unit for removing the ripple voltage so that a constant voltage without the ripple voltage is output at the output terminal,
10 the ripple removing circuit unit comprising:
 - a resistor connected between the constant voltage power supply unit and the output terminal;
 - a ripple voltage detection circuit unit
15 for detecting the ripple voltage and outputting a signal depending on the detected ripple voltage; and
 - a current circuit unit for receiving a signal from the ripple voltage detection circuit unit and supplying a current to the output terminal
20 or absorbing a current from the resistor in response to the received signal, so as to cancel the ripple voltage at the output terminal.

2. The constant voltage power supply circuit as claimed in claim 1, wherein

the current circuit unit supplies a current when the received signal indicates that the ripple voltage is negative, and absorbs a current when the received signal indicates that the ripple voltage is positive.

3. The constant voltage power supply circuit as claimed in claim 1, wherein

the current circuit unit comprises a current supplying circuit unit and a current absorbing circuit unit.

4. The constant voltage power supply circuit as claimed in claim 3, wherein

the current supplying circuit unit varies the supplied current depending on the received signal, and the current absorbing circuit unit varies the absorbed current depending on the received signal.

5. The constant voltage power supply circuit as claimed in claim 1, wherein

the product of a resistance value of the resistor and the supplied or absorbed current is
5 equal to the ripple voltage.

6. The constant voltage power supply circuit as claimed in claim 1, wherein

the ripple removing circuit unit further
10 comprises a capacitor connected between the output terminal and an output of the current circuit unit.

7. The constant voltage power supply circuit as claimed in claim 1, wherein

15 the ripple voltage detection circuit unit receives the voltage from the constant voltage power supply unit, compares the received voltage with a reference voltage, and outputs the signal in accordance with the comparison.

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8. The constant voltage power supply circuit as claimed in claim 1, wherein

the constant voltage power supply unit and the ripple removing circuit unit are integrated into
25 one IC.